

CMXP
NH
I
P57
P757
V.40
no.12



THE DRIFTWOOD GATHERER.

First Prize, Class A, December Competition.

W. F. Zierath.

The Photographic Times

VOLUME XL

DECEMBER 1908

NUMBER 12

THE MONTHLY COMPETITION.

THE December competition was an unusually difficult one, not only in the selection of the winning prints, but in the proper classification as well. Owing to several unforeseen circumstances, the November and December competitions had to be consolidated, making an unusually large number of entries to consider. The judges' task was rendered still more difficult by the new classification for the December competition. As stated in a previous issue and in our special announcement covering this competition, the entries were to be divided into two classes. Class A, open to all with the regular awards. Class B, open only to those who have never received an award in any competition.

Owing to the consolidation of two months' entries, a great many prints were sent in without a statement as to which class the contestant desired to enter. In order to be just and fair to all this necessitated the going through the back files of the publication and the placing in Class A of all entries whose makers had at some time received an award in our competitions. The balance of the entries were placed in the B. Class. This ruling in some instances may not afford satisfaction as the contestants may have

desired their entries placed in Class A, or in both classes, but we trust all contestants will appreciate the difficulties of our position.

We believe this classification a just and equitable one as it affords the novice a chance of winning awards in his own class, until he has arrived at the stage when his work can be considered with that of his older and more experienced brother pictorialist.

It has been suggested and with good reason, that a general competition makes it difficult for the specialist to receive due credit, so in order to thoroughly test the matter, we have arranged a number of special competitions for nineteen hundred and nine.

In arranging these competitions, the publishers of THE PHOTOGRAPHIC TIMES reserve the right to withhold awards in any competition wherein the entries do not come up to our standard of photographic excellence or when the entries are too few in number to make it a competition. In such event, the entries worthy will be held and entered in the next competition of their classification.

The subjects for 1909 competition are as follows; but are subject to change, due notice being given of such change or modification:



A HARVEST LANDSCAPE.

Second Prize, Class A, December Competition.

J. H. Field.

January—General Competition:

Class A—Open to all.

Class B—Novice class.

February—Home Portraiture:

Class A—Open to all.

Class B—Novice class.

March—Landscape with figures:

No classification—Open to all.

April—"Home Sweet Home":

No classification—Open to all.

Regular awards for the best pictures
with the above title.

May—General Competition:

Class A—Open to all.

Class B—Novice class.

June—Special Advertising competition:

No classification—Regular awards.

For the best picture that may be used
for advertising the goods of any
of the manufacturers whose pro-
ducts are advertised in our pages.

July—Self portrait competition:

Class A—Open to all.

Class B—Novice class.

For the best portrait of contestant
made by contestant.

August—Landscape and marine:

Open competition—No classification.

September—Interiors:

Class A—Open to all.

Class B—Novice class.

October—General competition:

Class A—Open to all.

Class B—Novice class.

November—Christmas card competition:

Open to all—No classification.

Regular awards—For the best post
cards carrying some Christmas
wish or thought.

December—Freaks:

Open competition—No classification.

Regular awards for the most unusual
picture, whether from double ex-
posure or properly made.

In selecting the winning prints in this consolidated competition, two evening sessions of over four hours each were required to thoroughly thrash out the merits of the various prints before making the awards. In several instances the difference in prints was very slight, as there were so many high class entries that the judges' task was a most laborious and trying one. The awards were finally adjudicated as follows:

First award—Class A, W. F. Zierath, for his entry entitled 'The Driftwood Gatherer.' It was the unanimous opinion of the judges that this entry possessed more true pictorial quality than any of the others in the contest, although the first award in Class B is a very close

second. The picture is true to its title, the figure expresses vigorous action and is entirely without the suggestion of pose usually so evident in attempts of this nature. There is just enough detail in the foreground to avoid monotony, and the whole picture is so keyed as to bring out the figure in strong relief. The picture as a whole, evidences artistic ability of a high order, and tells its simple story remarkably well. The data furnished with this entry are as follows: Made in August, 8 A. M., bright cloudy light, 1/50 second exposure, stop 4, on Ansco film. Pyro developer, enlarged to 8 x 10 from original 3 1/4 x 4 1/4 negative.

The second award—Class A, went to J. H. Field, for his entry "A Harvest



SHADOWS OF THE EVENING HOURS.

William Wheelock.

Honorable Mention, Class A, December Competition.



A SUMMER MEMORY,

F. F. Sornberger.

Honorable Mention, Class A, December Competition.

Landscape." This is a typical field picture, one of the soft harmonious studies in tone that Mr. Field so much delights in. Mr. Field's introduction of the tree in the foreground is quite Japaneseque, serving very nicely to balance the sweeping curve formed by the two hay cocks and the trees in the middle and far distance. We very much fear that the half tone reproduction will fail largely in showing the delicate gradation that goes so far in affording this picture its artistic quality. Data: negative made 6 A. M., in July, 1 second exposure, rear half R. R. lens, Cramer Medium Iso plate with Ingento Screen. Printed on Sepia Platinum.

Third award—Class A, to Wm. Wheelock, for his entry entitled "Shadows of the Evening Hours." Mr. Wheelock is a master of the after processes of manipulation and possesses an almost uncanny faculty of taking commonplace subjects and rendering them highly pictorial by his judicious use of light and shade. To best enjoy this picture hold it at arm's length. We very much regret that the data furnished with this entry have been mislaid, but we trust to be able at no far distant date to furnish our readers with a personal account by Mr. Wheelock of how he accomplishes some of his splendid results.

The fourth award—Class A, went to Bernard C. Roloff and Francisco Spicazza, for their picture entitled "Back from the Harvest."*

The Fifth and final award in Class A went to F. F. Sornberger for his picture



SISTER LILLIAN.

Harry R. Bodine.

Honorable Mention, Class B, December Competition.

*Our engravers were unable to reproduce this print.



PATH THRO PINEY WOODS. Harry D. Williar.

Honorable Mention, Class B, December Competition.

entitled "A Summer Memory." In addition to being a charming little outdoor study, it is an effective bit of outdoor portraiture as well, and the maker is to be congratulated in resisting the temptation to picture the young lady's face in the water and title it "Nature's Mirror." Notice please how effective the background is out of focus, a small stop would have utterly ruined this attempt from a pictorial standpoint. Data: made in July, 6 P. M., taken in shade on sunny day, 1/5 second exposure, f6.8 Goerz lens, Hammer plate, Rodinal developer, printed on Aristo Self Toning paper.

The first award in Class B went to R. C. Born for his picture entitled "Pecousic Road." We must confess that the title does not seem particularly appropriate and that a much more fitting one might have been selected, but that, however, has but little to do with the artistic merits of

the picture. The rendering of the snow is particularly good and the atmospheric effect equally so. The pose of the plodding figure is good and one cannot help but feel that rest and a night's comfort soon await him. Data: negative made in January, 4 P. M., clear light, open lens, 1/5 second exposure. Cramer Crown plate, metol hydrochinon developer, printed on Eastman's A. Bromide.

The second award Class B went to Will G. Helwig for his picture entitled "Boy with Apple." This is a very clever example of home portraiture and most clearly demonstrates the possibilities of the ordinary window for first class work. The lighting is to be specially commended. Note the full detail in the shadow side of the face and the absence of glaring high lights in the more fully illuminated portions. Good work throughout. Data: made in ordinary room, light from East window, three seconds exposure, stop f8. Pyro developer, printed on Eastman's sepia paper.



BOY WITH APPLE.

Will C. Helwig.
Second Prize, Class B, December Competition.



PECOUSIC ROAD.

First Prize, Class B, December Competition.

R. C. Born.

The third award, Class B, went to Miss Luella Kimball for her picture entitled "Reflections, Central Park, New York." Altogether too commonplace and unpoetical a title for so dainty a bit of woodland, but this can be forgiven this time in view of the picture's many excellences. Good judgment has been displayed in selection of view point, exposure, development and printing medium, and we regret very much that full data concerning this picture are not at hand.

The fourth award, Class B, went to Harry D. Williar for his picture entitled "The Path thro Piney Woods." This picture is to be particularly commended for its great range in tone values, which are so well distributed as to be in harmony throughout. The composition would have been improved by toning down the

spot of light at the base of the tree on the extreme left; cover this spot of light with your finger and note the improvement. No data furnished.

The fifth and final award in Class B went to Harry R. Bodine, for his entry entitled "Sister Lillian," another excellent example of home portraiture. The spacing and pose is particularly good, but a little more light on the shadow side of the hair would have been an improvement. Data: negative made in August, 2 P. M., subdued light, 4 seconds exposure, f8, printed on Azo.

We sincerely trust that the competitions as outlined for the coming year will meet with your approval and will prove of mutual benefit—and remember if you don't succeed—try, try again.



REFLECTIONS, CENTRAL PARK, NEW YORK.

Miss Luella Kimball.

Honorable Mention, Class B, December Competition

MONTHLY FOREIGN DIGEST.

TRANSLATED BY HENRY F. RAESS.

Balloon Photography.

Ballooning is a very popular sport these days, and the voyagers often take pictures in their journey through the air, but this kind of photography is beset with certain difficulties and only those who have had some experience, attain a fair degree of success. Dr. Miethe has done some work along this line, including three color photography with one exposure, and his advice may well be heeded. To stimulate balloon photography, the German aeronautical clubs offered valuable prizes for pictures. The C. P. Goerz Company did so also but only to those who were members of German balloon clubs, and used Goerz-Anshuetz Klapp cameras which are well adapted for this purpose. A small camera say $3\frac{1}{4} \times 4\frac{1}{4}$ is preferable. Its weight is not great and it is more easily handled than one of larger size. If anything special is to be photographed some system whereby the plates or films can be quickly changed should be chosen. Scenes change very rapidly when ballooning. Technical skill and a cool head are desirable. One of the difficulties is that a balloon constantly rotates on its axis, often combined with a pendulum-like motion. These two movements make it impossible to photograph even with very rapid shutters, but the rotation is alternately from right to left and *vice-versa*. The moment for the exposure should be chosen when the balloon is about to reverse, the balloon is then quiet. These changes in directions take place about three times per minute.

The forward and vertical movements usually cause no trouble. Furthermore movement in the basket will cause the balloon to swing. At least ten seconds before an exposure every one should remain perfectly quiet, the camera ready to make the exposure the instant the balloon stops its momentary rotation. At one thousand feet or higher the forward motion, even if rapid, will not cause any blurring of the picture. At great height the details are very small, and it is necessary that the negatives are quite contrasty, or it will be difficult to distinguish objects on the resulting prints. The light is very strong due to reflections from the ground. The camera also should be carefully tested to see if it is light tight. A camera which may not cause trouble when working on the ground, may not be light tight in ballooning, as the light strikes it from all sides. The plate holders and slides cause the greatest trouble. Yellow screens and color sensitive plates are well nigh indispensable for taking balloon pictures. The screens should be strongly blue absorbing. To use common plates usually results in disappointment, as the light is fully five times stronger in the air than on the ground. The photographer need not fear under-exposure when using a screen. A developer giving strong contrasts should be chosen. Rodinal 1-8 is good. In developing, the plates often have a fogged appearance, but this should not mislead the photographer, but continue development until the back shows the image coming through.—*Das Atelier des Photographen.*

CALLITYPY OR PHOTO TYPOGRAPHY.*

A Novel Application of Photography to the Printing Art.

BY JACOB BACKES.



IF EVERY type-setting and every line-casting machine should deny its function, and if palsy seized each hand that held a compositor's stick, the art of printing and the continued production of books, newspapers, and magazines would proceed uninterruptedly. But the appearance of the pages and columns in the succeeding art would bear a certain resemblance to ordinary typewriting, and the source and sign of the new printing dispensation would be the Camera.

To such a degree of perfection have the writing machines been brought, so universally introduced, so accustomed has the public become to the appearance of the type and to the uneven right-hand margin, and so satisfactory have photo-engraving processes become, that revolution in the print-typing art is possible, and may be impending. The seed and the sine qua non of the impendence is the Camera.

This page and the two following ones are not, as might at first glance be supposed, advertisements of a type-founder's product. They were printed from ordinary line-engravings the photo-engraver's copy for which was prepared by the adapted operation of an ordinary typewriter, combined with subsidiary penwork and matter pasted on the typed sheets, this penwork and pasting-on being of the simplest kind.

The first phenomena observable by the reader are the three different sizes of type, all of which sizes owe their origin to the operation of only one ordinary writing machine equipped with the size of type under the reader's eye. Of course, any print-typing system worthy of the name must make provision for the production of any small size of type, because the magazines would contain only half of what they now do if they had to be set in fac-simile of typewriting, and the news columns of the dailies only a fourth as much under similar conditions.

The explanation is: By making the typewriting of the type-page or column of the engraver's copy sys-

* There has been considerable comment of late in the general press on this ingenious process. If our readers are sufficiently interested in the subject we are prepared to have the author more fully explain his methods of work in a series of articles.

tematically larger than the actual printing size desired, then ordering a corresponding degree of reduction on the engraver's part, the finest gradation of sizes smaller than the original typewriting are secured.

For example, the preceding page illustrates an exact fac-simile of common typewriter type. The original of this column, as may be verified by anyone copying it on the machine, was 8/6 times this actual printing size, and therefore, as compared with the type on the preceding page, this type will contain more reading matter in the same space, in the same proportion as is the square of 8 to the square of 6 (64 to 36).

As in typewriting of standard size throughout the world an inch contains six close lines, it follows that original engraver's copy 7/6 times as long vertically as the printing size desired results, in the line engraving, in type running seven lines to each inch; if 8/6 as large, the type will be eight lines to each inch; 9/6 as large, printing type nine lines to the inch, etc. Of course it is unnecessary to say that the length of the lines must be increased in the same proportion as the number of them.

In any epistolary communication an author, editor or business man desires his letters to "look personal". There are reasons equal in number and cogency why his printed communication to the public should also "look personal" and individualized: therefore no attempt to secure even right-hand "parallel" margin should be made. The embellishing and relieving effect of initials are secured by leaving a blank at the beginning of the writing, and when the page is otherwise completed, filling in the space with a letter made with pen and ink; or, one may be sheared from discarded printed matter and pasted in place.

For distinction or emphasis, secure bolder letters by retyping the words, as:

Light impression.

Ordinary impression.

Heavy impression.

The letters can be gone over with the pen, as some are in these

lines. If your machine has only American letters, a stroke or dots with the pen can change an a into à, an e into é, an o into ô — in short any character in almost any modern language may be produced in a style commanding respect in Paris, Berlin, Naples, Barcelona, Copenhagen.

If appropriate and germane to the matter, a line can be pasted in clipped from previous printing, as:

Voigtländer

Lines in displayed letters are obtained in one of several ways, as follows:

Matter can be type-set, and the type-set lines inserted with the photo-engraved blocks.

Matter can be type-set, and the proofs therefrom pasted on the typewritten copy, and a "callitypic" block made from all.

On the typewritten original the place of type can be taken by letters made with the pen if the necessary skill for this is available. A drawing can be inserted whether made with the pen or clipped from previous printing.

HIGGINS' PHOTO MOUNTER

In preparing callitypic copy for a pamphlet, circular, or advertisement, the name, address, and nature of the business are the items generally displayed. Such matter can often be sheared from old circulars, letter heads, and advertisements, and the adapted combination of this material, as indicated, with any typewritten or penned matter will usually secure desired results. This column contains clipped matter illustrating how this work is done, and the possibilities in this direction. No metal types, leads, or rules are required, nor the least experience in printing, designing, engraving, transferring, or "justifying" process.

The severest test to which a new print-typing method can be put is the class of composition known as tabulations.

How well callitypy, the photo-typography, stands this test can be seen in the accompanying calendar. This method permits of the perfect intersection of lines, as these are made with pen and ink, not with the metal rules of the printer.

POST CARDS

AND SOUVENIR ALBUMS
FINEST AMERICAN MADE

The Albertype Co., Brooklyn, N. Y.

This column is photographically reduced from an original measuring 4 $\frac{1}{8}$ by 13 $\frac{1}{8}$ inches each way. Any effect which is obtained in any of these sizes of type is of course obtainable in any other size, down to the smallest, from the same copy.



Fac-Simile of Typewriting and Pen-and-Ink Rulings
The Photographic Times Calendar for 1909
Try this on your machine, with your advertisement

ADVANCED GETTING RESULTS.

BY C. H. CLAUDY.

IN SIX PARTS—PART V.



N the practice of the art or science of photography,—we won't quarrel over terms,—you will have struck many a small snag—if you have followed the beaten track of the thousands of thousands of pilgrims who have gone this way before you. You will have had to master many a tiny problem, insignificant in itself, in the darkroom and in the field, yet at that particular moment vital, to comfort at least, if not to success. Who has not cursed the inventor of the flapping focusing cloth, and blessed the first suggestion of an elastic which confines one end to the camera and the other to the head of the operator? Is there a man or a woman who has not carefully poured the contents of a thick lipped bottle all over everything but the desired spot, and looked shamefully into the mental looking glass when the simple expedient of wetting the lip of the bottle was explained as the remedy for such future performances?

There are a number of such little everyday matters, which the beginner notes not—and which his more advanced brother can catch onto only by reading, by observation, or by that effort of mind which results in invention,—invention not less than a thousand others have invented it beforehand. Yet some of them are so trivial that in themselves it hardly seems right to take space to tell of them. And yet, the comfort there is in some idiotically simple expedients.

Have you a sheet of plate glass in your darkroom—any old size from 8 x 10 up

to 20 x 20? Go to a plate glass store—which will probably be the largest paint store in your city, and ask for a piece of plate glass cut from waste—that is, from the broken plate glass windows which are continually being replaced. Such a piece will cost but a few cents. You can round off the dangerously sharp edges with a rasp in a few minutes yourself. When you have to swab prints, pile them on this, face up. If you are preparing prints for squeegeeing, the plate glass piece is an ideal water table. If you want to dry prints quickly, put a pile on the glass and put on pressure for long enough to get the water out. If you want a cover for a large dish—as a tray full of hypo for prints, here it is. If you want to put a large mounted print under pressure, here is your true plane and your weight combined. If you wish to trim prints with a knife—here is the surface. Foolish? Perhaps. But comfortable.

You may have that divine spirit of orderlessness which permits seventeen varieties of bottles upon your shelves, none with labels, and contents known by the size, shape, and color of bottle. Such a laboratory has the one advantage of strict privacy—since no one will experiment with your unknown solutions. The trouble is that you are so very apt to forget what is in that blue, round bottle, and wonder remorsefully “what the dickens this yellow stuff is in that old square glass stoppered bottle?”

Yet if you have labels, you will find they have the habit of getting dirty,—and the still further criminal tendency to

come off entirely and wander far from home, underfoot or in the sink usually. The remedy is simple. Stick 'em on with a good glue. Then take the top of a can of soda (the contents of the can is not material) and in it melt the large amount of one whole penny's worth of paraffine—any drug store. For ten cents purchase a cheap one inch paint brush. Paint the labels with the melted paraffine, letting it lap the label onto the glass by a quarter of an inch. Then handle those bottles with all the wet and sticky fingers you want. If the paraffine comes off—put it back. But it won't, for a long time.

Ever fuss and fume on a hot day waiting for some refractory sulphite or carbonate to dissolve. Making up a solution with a definite amount of water and a definite amount of chemical is useless if you are going to throw out the last thirty or forty grains because they won't dissolve quickly enough. The thing to do is to get a small glass mortar and pestle—they are very inexpensive at any chemical supply house—and powder such chemicals before putting them into the water, and then adding a little water and making a paste in the mortar. No, it takes not more than ten seconds longer and saves minutes in making up solutions.

Why make up solutions from dried chemicals? Well, I am either very old-fashioned, or very new fangled—I don't quite know which, but I have found that it pays and pays well, when using things like pyro and carbonate and sulphite of soda, to keep the chemicals in their dry form and mix up fresh for each bath of developer. It takes but little time and it gives most amazing results.

Did you ever have the glass stopper for a bottle get so puffed up with pride and stuck on itself that it proposed to stay right there and look pretty to the

end of time? Of course. Did you tie a string to something, and pass it about the neck of the bottle, and pull said bottle back and forth in an endeavor to heat the neck by friction? Or use cloths wet with hot water? Or a hot poker? Or dipped the bottle, neck down, in hot water and broken it and your temper at the same time? Of course. Next time take a small hammer and tap, tap, tap, and keep on tap, tap, tapping on the cork, up if possible, side wise if you can and it will come. The time after, don't have the cork stick at all. Oh yes, it is easy—just wipe the cork and inside of the neck thoroughly but not too fully with ordinary vaseline, and the cork will not get a bit conceited in the future.

If you have ever seen an aspirator bottle the chances are you have gone and looked up the price intending to get some and then regretfully said, "not for mine." An aspirator bottle is one with a hole near the bottom. Into this hole fits a glass spigot and pipe. You put solutions in the bottle and draw them off from below instead of from above. You don't disturb the sediment, if there is any, or make a mess, and you can get exactly what you want as to quantity. They are very convenient and pretty, but somewhat expensive. Then did you ever read those enticing stories about making such things at home, with a file and turpentine for boring tools? Did you ever burst a bottle or so and cut yourself, trying it? If you haven't, don't. Get any old big bottle. Burn two holes close together through the cork, each big enough to take a glass tube—if one is much smaller than the other, so much the better. Fit a glass tube with a U end in the larger hole so that it nearly touches the bottom of the bottle. Put a short length of small tubing into the other hole. Get a pinchcock and three inches of pure gum tubing to fit the U,

and a six inch length of straight tubing and connect. Fill the bottle. Lay the cork, tubes, and pinchcock in a basin of water—pinch the pinchcock. Insert the cork and the tubes in the bottle. When you want any solution, pinch the cock, the water in the U will form a siphon and pull up solution from the bottle, which will run out the other end. *Q.E.D.* They are fine things to keep ready made acid hardener in,—for speedily making-up fresh hypo for instance. See that the outside "leg" of tubing is longer than the inside "leg" or the siphon won't work.

Of course in the field you have long ago exhausted the possibilities of rocks and strings and fence rails to keep the camera steady in a wind, but did you ever have it blow off anyway, sometime, and break the ground glass? There are a dozen substitutes you can use, any one of which will do—paper oiled with vaseline—a handkerchief, a pane of window glass on which has been smeared some whiting or sand soap or even light colored mud. But if it is possible, take an unused plate,—put it in camera—stop to f64—give a hundredth of a second exposure at bright sky, develop for one minute in a twenty minute developer, and fix, and you will have a perfect ground glass substitute, all correctly cut the right shape.

You have all heard the old fairy tale of shaking a wrinkled sheet used as a background for a still life, in order to get rid of the wrinkles in the finished picture. It seldom or never does it. But wetting the sheet will do it, and not need the shaking at all.

Have you sometimes found a negative with some defects in it which you found it impossible to remedy with the retouching pencil because you could not get the deposit thick enough? It is not uncommon. The remedy is to do the work upon something besides the sur-

face of the gelatine which, even when varnished takes penciling but lightly. best way is to shrink a piece of parchment paper onto the back of the negative—get a colorless, even, thick paper. Wet it down thoroughly. Put a little fish glue about the edges of the negative on the glass side. Lay, glass side down, on wet paper. It may wrinkle, don't you care. When it dries it stretches taut and smooth. Do your retouching with your pencil on this, to any desired thickness. The plan has the added advantage of permitting you to thin down portions of the negative by painting with vaseline, those portions of the paper which cover the negative where you want it thinner. It also permits working in tints—blues for a very, very slight intensification and yellows for strong work.

It is hardly to be expected that you have passed a year in working in photography and have not made yourself, or had made, a grating of wood for the bottom of your sink—kitchen, or laboratory, it makes no difference. Such gratings allow a free circulation of air beneath trays, and keep them at the temperature of the room, permit water and solutions to run freely away, protect both sink—if porcelain,—and glass utensils accidentally dropped in the bottom from breakage and are a general mess preventor. But you will sometimes have had the unpleasant experience of having had a print, in the washing, climb out of the tray, creep between the slats of the grating and carefully and conscientiously plaster itself directly across the waste pipe, with the unpleasant result that your kitchen or laboratory gave a passable imitation of a natatorium and the room below of good sized plasterer's and wall paperer's bill.

Prevention is the cure, always. Get a pipe—glass, brass, rubber, or wood, a

little higher than the top of the tray as it sits on the grating, from the bottom of the sink. Bore the walls of said pipe—which should fit the waste pipe hole of the sink, full of holes, all sides. If a print gets across the top, the water runs through the holes in the sides, and if a print plasters itself across the holes in the sides there is still the hole through the pipe. You will find a measure of the safety of this device in the difficulty with which you can stop up all the holes with a wet print, trying your best to do it.

No, I haven't really started. But I have to stop, because the PHOTOGRAPHIC TIMES has a lot of good things to show you this month. I firmly believe that if every man, woman, and child who has found a new kink or wrinkle would write it for publication, most of us would find photography easier than we do. The

elementary ones I have run over here are more needed by the advanced worker—meaning him for whom this series is being written—the amateur of a year's standing than for his brother beginner. Too many ideas at once make confusion—to tell a man how best to wash prints and at the same time how to prevent a flood might discourage him.

So with no apologies for the puerile nature of this part of the story I make you my best and lowest bow. I can tell you now that the sixth and last of these papers is upon the subject of enlarging—and if between the writing of it and your reading of this there are any questions regarding enlarging you—any of you—would like to have taken up, you have only to ask to be answered, one way or the other.

SOME NOTES ON SNOW AND ICE PHOTOGRAPHY.

BY W. S. DAVIS.



WINTER landscape after a snow storm is certainly beautiful to look upon, especially when the snow is soft and clings to the delicate branches of the trees, and when such a subject is seen against a blue or soft gray sky, the effect is almost inconceivably delicate, but alas for the unwary photographer who attempts such a subject without suitable plates and screens, for of all phases of landscape photography, the most difficult is undoubtedly the making of snow and ice pictures, as it is necessary, in order to secure good results, that the photographer be able to overcome technical difficulties not usually met with at other seasons of the year.

So far as the outfit is concerned, little need be said, except that a color screen

or ray filter should be included in it, for while not always needed, such subjects as snow covered tree branches against a blue sky, can only be secured satisfactorily by its use. As a tripod must be used for most of the work, see that the metal points on the legs are sharp, otherwise the camera may take a tumble at an inopportune moment, especially when working on ice.

Iso or ortho plates, either backed or double coated, will give the best results for all-round use, although a plain plate will sometimes do as well when there is little color in the subject.

While some advocate making the exposures only on cloudy or overcast days, I think this a mistake, for many of the best effects are caused by sunshine, and to secure results which shall possess any

claim to the pictorial, the exposure must be made when the subject best expresses the idea it is desired to convey in the finished work, whether the day be bright or cloudy.

Shadows play a most important part in snow pictures, for snow is not properly represented by pure white in the print, therefore watch the effect of the shadows cast by the trees and undulations in the snow itself, and in arranging the composition, study the placing of the shadows as carefully as the solid objects in the view, for in pictorial composition, objects and shadows should be considered simply as masses of light and shade, which must form a harmonious pattern on the plate. If it is desired to include a tree branch loaded with snow, against a background of sky, choose the time of day when the light is on the subject, and a little to one side. If taken against the light the snow will either look gray, or blend with the sky. When the composition contains a broad expanse of snow in the foreground or middle distance, with nothing but the undulations in the snow to vary the tone of white, a better result will be obtained by making the exposure either in early morning or late afternoon, when the shadows are long. To avoid monotony in such a foreground, a few snow covered twigs or grasses may be included to advantage, if placed in an unobtrusive position, or failing that, some tracks in the snow will serve the same purpose.

In focusing use a stop large enough to preserve the atmospheric effect, for uniform sharpness of objects in both foreground and distance will produce a hard mechanical result. Where a realistic effect is aimed at, focus on the foreground until it is moderately sharp, and then if necessary, stop down just enough to avoid extreme blurring in the distance. When the difference between foreground

and distance is not great, the lens can generally be used at full opening to advantage.

If one's trouble in selecting and arranging a view is to count for anything, a suitable exposure must be given. Many beautiful subjects are spoilt by under exposure, trees represented by absolutely black lines and snow by paper as white as chalk, without a suggestion of half-tone between the two extremes, so don't be afraid of exposing long enough to secure detail and gradation in the darkest shadows. It is, however, not only allowable, but even necessary sometimes in representing a brilliantly lighted snow scene, with dark trees in the foreground and sunshine on the snow, to have very deep shadows in the finished picture, only they must be kept *clear* and *transparent*, and not allowed to become mere blotches of black.

On a gray day, more details will be visible in the deepest shadows than are seen on a bright day, the scale of gradation between the high lights and deep shadows being much shorter, consequently the deepest shadows will be lighter, and the highest lights darker than would be the case with the same subject in bright sunshine.

To secure true values (*i.e.* gradation of tone and color) the exposure must be timed for the deepest shadows in the view, without regard to the snow at all. This may sound queer to those who have been taught to expose only for the snow, but if suitable plates and screens are used, the snow will take care of itself, so there is no excuse for not securing a soft harmonious negative if proper care is taken. While on the subject of exposure, I would advise the use of a good exposure meter, but with this caution—if the subject contains dark objects in the foreground, give the regular exposure called for on a similar scene with-

out snow, instead of one-half or one fourth the normal, as is generally recommended in the instructions accompanying the meters. Such reduction should only be made on open landscapes without dark objects near by, or on ice scenes.

To those who are not familiar with the use of a color screen or ray filter, a note regarding those subjects which require it, may be useful. The object of using a yellow screen on the lens being to convert the blue and violet tints into greens and grays, in order to lessen their over active actinic power sufficiently to make them take their proper place in the scale of color values with the less actinic colors, such as yellow, orange, and the warm tints generally, it naturally follows that it is only necessary to use one when a scene contains a considerable amount of cool color in opposition to warmer or less actinic colors, as for example, dark brownish tree trunks with bluish shadows on the snow, or in cases where snow or ice is taken against a background of blue sky. On a gray day a color screen can generally be dispensed with.

Not by any means the least effective and beautiful winter pictures are ice scenes; such subjects as rivers or harbors during a spring break-up, or a coast view after a winter gale, when the ice cakes are piled up on the shore in fantastic shapes, being especially good.

In developing exposures of snow and ice, the most important thing is to stop in time, as the snow must not be allowed to become opaque in the negative, so stop development as soon as the details are fully out in the snow, and if the exposure was right the details in the thinness parts of the negative will be out at the same time, making it unnecessary to prolong development. Time development is without doubt the best method,

only the time should be altered to suit the amount of contrast in the subject, a flat view requiring longer, and a subject with strong contrast less than the normal time. I generally use a developer containing one to two grains of reducer (developing substance) to each ounce of solution, and allow it to act about two-thirds as long as for ordinary subjects, development being complete in three to five minutes according to strength of developer employed and amount of contrast desired in the negative, the plates being done by timing as indicated above, which I find more satisfactory than examination of the plate in a dim ruby light to determine when to stop development.

To have printable details in the snow, the darkest parts of the negative should be thin enough to see objects through easily, when held up to a window. If the negative will not bear this test it should be reduced with a two to five per cent. solution of ammonium persulphate (which will only attack the strongest parts), until it will. Such a negative will give a good print by any of the processes in general use, either for contact printing or enlargement.

Among the many printing processes in use, bromide, platinum, or carbon, all suggest themselves as suitable, but for general use, especially for the smaller sizes, the various grades of bromide or "gaslight" papers leave little to be desired, and provided the grade and surface best adapted to the negative and subject, is selected, a wide range of effects is obtainable.

To lantern slide enthusiasts it is hardly necessary to add that good slides of snow views are among the best which can be shown, the snow being brought out with great brilliancy and luminosity on the screen.



Editorial Notes

W

E are frequently requested to publish a formula for flash powders, which request we have always denied. All flash powder combinations are highly explosive and their preparation even in the hands of experts is a hazardous undertaking, and we strongly advise against the attempt of making them by the amateur.

Nevertheless the strongest flash powders are harmless if handled properly. We occasionally learn of some one being injured in flash light work, but in almost every instance, the cause may be traced to some act of carelessness on the part of the operator. Probably the most frequent cause of disaster is the use of explosive flash compounds in lamps designed solely for the use of magnesium powder. Never use a flash compound in any lamp or device that has a storage chamber for the compound, as when ignited in a confined space, the gases generated will produce a terrific explosion. For everything except pure magnesium use an open lamp, or some device where the powder is not in any manner confined. Whatever form of flashlight you use, be cautious and careful, and think good and hard before you ignite it. Be careful that your lamp is so placed that when the flash is made the flame can not reach any easily ignited substance such as lace curtains or draperies, and that it is in such position that the flame cannot harm you or your subject. If you are using a magnesium storage lamp of the type in which the

der is blown up through the flame, hold the lamp so the flame can not reach you, and do not attempt to extinguish the lamp with the blowing tube still between your lips—this very thing was done by a well-known amateur, and but for the fact that he was wearing a heavy pair of blue goggles, his eye sight would have been ruined. All flash preparations are safe if *properly handled*, but always remember you are dealing with an explosive and exercise every precaution for your safety.

* * *

Cold weather time is already at hand, and the usual crop of cold weather troubles will develop if you do not do a little thinking to forestall them. The chief difficulty is, of course, temperature. You must remember that cold slows up all chemical action, and that proper temperature plays a most important part in all photographic results. By all means provide yourself with a thermometer, and test the temperature of your various solutions and provide some means for keeping this temperature at the normal degree. A hot water bottle placed under your developing tray will be found a great help. With tank development the problem is easy, as you can use the tank in any room and easily provide the normal. In making prints, the temperature of your solutions is just as important as in developing plate or film, and any great variation from the correct degree will degrade your results. Be careful likewise that the temperature of your washing bath is not too low, or blisters and

other troubles will crop up. Use your thermometer and keep your solutions normal, and cold weather troubles will not happen.

* * *

A few suggestions relative to the selection and preparation of prints for exhibition purposes may not be amiss at this season. In selecting prints for the purpose, remember that usually the artistic rather than the technical side will be most considered. Prints without artistic merit or possessing a purely personal interest are not likely to be considered. Also that it always pays to be dignified.

So-called humorous attempts unless unusually well done will quickly be relegated to the "not accepted" class. Pay attention to harmony, see that your mount or frame is in keeping with your

print. Avoid freak maskings, and freak colors. Likewise, avoid a gilt or other gaudy frame—a gilt frame *might* possibly harmonize with some print, but the chances are that it would fight with every other print and frame in the exhibition, and the hanging committee would throw it out to preserve the general good effect—and if they didn't throw it out, they ought to.

Remember also that the secretary of the organization to which you are sending your prints is hard worked, and pay attention to the proper packing and labeling of your prints as set down in the rules governing the exhibition.

If possible send your exhibit in a box with the cover *screwed* on, and with a return address on the underside—this will have much to do with your receiving your exhibit back in good order.



HOMEWARD BOUND.

William T. Knox.

The American Annual of Photography, 1909.



THE FISHERMAN.

The American Annual of Photography, 1909.

D. H. Brookins.

THE AMERICAN ANNUAL OF PHOTOGRAPHY, 1909.



E are quite sure that everyone will agree with the editor of *The American Annual of Photography*, 1909, where he says, in his preface, that the "volume is better than last year's performance; more varied and helpful in its information; more interesting in its illustrations." On every one of the three hundred and twenty-eight pages of the book there is very definite improvement and a decided advance. In our opinion *The American Annual* this year reaches the highest point yet touched in the long series of

twenty-three volumes. The articles cover a very wide range of photographic work and interest; the illustrations are well chosen and beautifully printed. Among the authors and illustrators we note an unusual proportion of workers of international fame, as well as writers and picture-makers well known by their contributions to past volumes of the *Annual*.

The papers on practical topics number sixty-one and there are over two hundred illustrations in black and white with thirty-two plates printed in color. The writers of the articles include: A. Rad-

clyffe Dugmore, William Findlay, C. E. Kenneth Mees, Henry C. Delery, Mrs. Helena C. Sutherland, James Thomson, Henry C. Raess, Harry S. Hood, Alexander Mackie, J. A. Anderson, Malcolm Dean Miller, Dr. H. D'Arcy Power, Wm. Farren, J. W. Little, K. Theodor Krantz, C. H. Claudy, Thomas Bedding, Charles E. Fairman, Edgar A. Cohen, John H. Gear, Wilson A. Bentley, H. W. Hales, Alfred H. Saunders, Richard Trotter Jeffcott, George Rettig,

Alfred Watkins, A. Lockett, R. E. M. Bain, H. Snowden Ward, and others.

The topics dealt with are more than usually diversified and cover "Camera Hunting for Big Game," "Early Morning Photography," "Color Sensitive Plates in Portraiture," "Stereoscopic Photography," "Photographing Cats and Kittens," "Helping the Defective Negative," "Separate Solution Development," "Commercial Photography," "Photographing Lightning," "Tank De-



EDWARD BERGE.

Mrs. Jeanne E. Bennett.

The American Annual of Photography, 1909.



THE SERMON.

T. Lee Symes.

The American Annual of Photography, 1909.

velopment" (several articles), "A Description of the Photographic Rooms of the Y. M. C. A., New York," "Night Photography," "The Autochrome Process," "Enlarging," "Portraiture," "Flower and Natural History Photography," "The Oil Pigment Process," "Snow and Frost Photography," "The Bromoil Process," "Orthochromatic Plates and Their Use," "Thermo Development," "Shutter Testing," "British Conventions," and many other papers

dealing with minor manipulation and the pictorial side of photography. The writers seem to have set themselves to make their subjects as clear and as helpful as possible, so that *The American Annual* may be regarded as a very valuable text book, covering practically the whole range of photographic work and written by authorities in the different branches. We are glad to note that an index to subjects has been added this year as a new feature, facilitating ready



THE WATER NYMPH.

Miss Kate Smith.

The American Annual of Photography, 1909.

reference to all the different subjects included in the book.

Turning to the illustrations we have a veritable feast of interest and pleasure laid before us. There are portraits by Davis & Eickemeyer, Rudolf Dührkoop, William Crooke, Louis Fleckenstein, Curtis Bell, William Gill, W. M. Hollinger, Miss Mathilde Weil, T. Lee Syms, Miss Hilda Stevenson, Helen W. Cooke, C. H. Claudy, Mrs. J. E. Bennett, C. C. Kough, Mrs. E. P. Cabot, and others equally well known. In the field of

landscapes and outdoor figure work we have examples by W. J. Farthing, J. M. Whitehead, M. D'Arcy Power, Mrs. E. P. Cabot, Mrs. Caleb Keene, Miss Kate Matthews, E. G. Dunning, Rev. E. G. Watts, Miss Kate Smith, A. K. Dannatt, Edgar A. Cohen, Mrs. D. Mahoney, H. W. Hales, John Beeby, J. T. Ashby, C. M. Shipman, H. H. Brooks, Theo. Eitel, Cleo S. Bourgeois, George L. Beam, D. H. Brookins.

Turning to special branches of work, the pictures of harbor scenes by William

Findlay, Charles E. Wanless, W. J. Farthing, John W. Schuler, W. E. Dassonville, William T. Knox, J. F. Wilde, are unusually interesting because of their pictorial quality. The volume is also strong in nature work, including pictures of caribou and moose by Mr. Dugmore, several very delightful studies of kittens and lion cubs by Mrs. Sutherland, a clever piece of dog portraiture by Miss Belle Johnson. A few wonderful examples of fruit and flower photography by Robert Burnie, K. Theodor Krantz, and W. J. Farthing will make a strong appeal to those who have attempted this difficult work.

A valuable feature is a compilation of notes on portraiture by J. W. Little. This paper, which is illustrated, covers the whole art of portraiture and occupies some eighteen pages. The article on the British Conventions, by Mr. H. Snowden

Ward, deserves mention as outlining the program of the British Convention for next year. There are also several papers treating of the commercial side of photography, full of helpful hints and suggestions.

We are glad to see that the formulary, which for so many years made *The American Annual* a standard reference book for photographers, has been restored to its place at the end of the book. The new formulary, however, has been carefully gathered for the 1909 *Annual* and is very full and up-to-date in its information on all branches, with the usual selected tables.

Taking it all together, *The American Annual*, 1909, is one of which the editor and publishers may well be proud and we can safely say that it is at once the most helpful and most attractive photographic book of the year.



THE DOCK.

The American Annual of Photography, 1909.

J. F. Wilde.

SYSTEM IN MAKING GUM BICHROMATING MIXTURE.

BY DR. W. F. ZIERATH.



HERE is probably no more fascinating printing method than the gum bichromate process. Neither is there any process which will give a higher percentage of failures and result in greater waste of time, materials, patience, and profanity than this self-same interesting method of obtaining prints. But the joy of producing a perfect print and admiring its manifold beauties is so great, that the poor enthusiast forgets all about the time he wasted in preparing mixtures, coating paper, printing and developing that he straightway proceeds to do what he has so emphatically sworn that he would never do again.

Then follows the usual run of overprinted, under-printed, too contrasty or too soft prints, which are consigned to the waste basket in rapid succession. Eventually repeated failures do their evil work and the process is laid aside and the more characterless printing methods used instead.

It certainly *is* most discouraging work for the well intentioned amateur to engage in. My own experience has been like that of hundreds of other amateurs and my failures too numerous to remember, but after careful consideration of the cause of the repeated failures, the conclusion arrived at was, that it was all due to the hit or miss method of compounding the gum-pigment-bichromate mixture. That is the most likely source of the trouble in a great per cent. of the cases of failure. The process is so simple in theory and so pliable in the hands of the worker that we are too prone to

prepare our coating mixture in a happy-go-lucky fashion. We pour out an unknown quantity of gum solution, mix it with the pigment and then pour in a little saturated solution of bichromate of potash, smear it on a sheet of paper, expose it in bright sunlight 5, 10, or 15 minutes and maybe we get a good print and maybe we don't. "Don'ts" predominate.

A coating mixture prepared without any regard to the quantity and quality of the ingredients, without any regard for the qualities of the negative or the effect desired cannot be expected to yield uniformly successful results, and it doesn't.

The successful gum print is the result of careful planning and the consideration of several factors. Haphazard, trust-to-luck methods won't result in successful prints, except by accident. And when this thought dawned upon me, the cause of my successive failures was apparent and my determination to reform and reduce gum practice to a systematic basis, has borne good fruit. I can truthfully say that any desired degree of contrast or softness may be obtained in a gum print by modifying the quantities of the several ingredients of the coating mixture. The paper can be adapted to each individual negative. Prints can be made which will show as much detail as a Solio print and on the other hand a sketchy fuzzytype can be obtained from the same negative.

But the obtaining of these results requires the application of systematic methods and careful planning. One must determine what effect he desires and then,

by application of the rules laid down further on in this article, he will surely obtain those desired results. I have made gum prints off and on for the last ten years. My method of preparing the coating mixture was that followed out by the majority of workers who use the process only occasionally, but the number of failures was out of all proportion to the successful prints. Repeated failures resulted in a temporary abandonment of the method. When the process was again taken up, weeks or months later, all the lessons learned in the last "gum-spasm" were forgotten and the usual run of failures followed.

Last winter I determined to get the thing down to a system and my efforts were crowned with success—at least the comparison between the sum total of past failures and present ones leads me to call it that. A recital of the various steps leading up to the formulation of the rules may help to impress the reasonableness of them on the reader and I shall proceed to do so.

My first step was to select a negative that might be regarded as a fair sample of the majority of my negatives. Then I standardized the solutions which go to make up the coating mixture. First of all I discarded the gum arabic solution I had been using and made up the gum solution fresh each time a coating mixture was prepared.

I obtained an ordinary wood mustard spoon and a couple of ounces of pulverized acacia (obtainable in any drug store). One level spoonful of acacia and a dram of water make the standard gum solution.

Next, I half filled a small bottle with crystals of bichromate of potash and filled it with water. After a few hours the solution was a saturated one. This made the standard bichromate solution. As the liquid is used more water is added, al-

ways being sure that there are undissolved crystals in the bottom of the bottle. A small medicine dropper was also purchased.

Then I began experimenting. In a small wedgewood mortar I put a level mustard spoonful of powdered acacia and added to it a dram of water. Then from a tube of moist water color I squeezed out about $1/3$ of an inch of pigment and with the pestle thoroughly mixed the acacia solution and the pigment. Lastly I added six drops of the saturated solution of bichromate of potash using the medicine dropper. This made my proportion of acacia to bichromate solution 10 to 1 (60 drops to the dram).

The coating mixture was applied to paper and after several prints had been made it was determined that 20 minutes exposure in bright sunlight was the proper printing time. The resulting print was very contrasty and all the very fine detail was lost.

At this point let me state that my method of developing gum prints is to put the print in tray and allow it to develop in water at room temperature. As the water becomes charged with bichromate it is changed, likewise when discolored with pigment. Seldom will it be found necessary to elevate the temperature of the water or resort to local development. When local development is necessary, I use a small cup with a lip and gently pour the water on the portions it is desired to reduce. The best results are obtained by simply soaking the print and gentle agitation of the tray at intervals. Of course this method of developing takes time but results justify the method.

I next prepared a coating mixture as before, but increased the amount of bichromate solution to 10 drops making the ratio 6 to 1. Fifteen minutes exposure

in bright sunlight was required and the print, though contrasty, was not quite as contrasty as the preceding print.

Thus I proceeded each time increasing the amount of bichromate solution and eventually secured a set of five perfect prints, from that particular negative, which ranged from very contrasty and lacking in fine detail to very soft and full of detail. The following table was also evolved and pasted on the wall of my darkroom. By referring to it whenever a coating mixture is being prepared I almost invariably succeed in obtaining the effect desired.

Always consider the single mustard spoonful of powdered acacia and dram of water as 60 drops.

A dram and a half of the coating mixture will suffice to coat four or five 5 x 7 prints. The proportion of acacia and bichromate solution is expressed as a ratio in the table *e.g.* acacia 10; bichromate 1 equals 1 dram of acacia solution (60 drops) to 6 drops of bichromate solution.

Acacia Sol.	Bichrom. Sol.	Exposure Time.	Effect.
10	1	20 min.	great contrast.
6	1	15 "	contrast.
4	1	6 "	soft and full of detail.
3	1	4 "	soft and full of detail.
2	1	3 "	very soft.
1	1	2 "	very soft.

By applying the data used in compiling the table the following rules may be formulated:

1. The lower the proportion of bichromate the greater the contrast in the print and the greater the amount of exposure required; and the converse.

2. The larger the proportion of bichromate solution the greater the degree of softness and detail and the shorter the length of exposure required to print.

The amount of pigment used depends on the form. If the moist water colors

are used squeezing out a cylinder 1/3 of an inch long will usually be found to be sufficient to the dram of acacia solution. If the moist colors in the pans are used a portion about the size of a split pea will be necessary. If powdered pigments are used the amount varies, but in general, it should be about one-quarter of a mustard spoonful.

Dark colors usually require a slightly longer exposure than do the lighter shades.

The smoothest and most uniform coatings are those applied to sized papers. Smooth papers are necessary where plenty of detail is wanted. Whatman's hot pressed paper may be taken as a type. For sketchy effects the rough surfaced papers such as Whatman's cold pressed papers are best.

To obtain the best results in gum printing, proper coating tools are essential, and no brush will give the results that a badger hair blender will accomplish. The initial investment in such a brush may be a trifle large but it is worth the money expended.

In applying the coating mixture to the paper care must be exercised not to have the coating too thick. An amount just necessary to evenly coat a space half inch larger all around the size of the negative is the proper amount. There should be no puddles or streaks.

All necessary variations in the shade of the pigment should be made before the bichromate solution is added because the yellow color of the salt causes confusion.

If these few simple rules are borne in mind while preparing the coating mixture and in applying it to the paper the number of failures will rapidly diminish and gum printing will become a pleasure instead of an inciter of impatient comments on the perverseness of all things material.

Items of Interest

A LITTLE MORE THAN A YEAR Ago there was held at the Albright Art Gallery an exhibition of artistic photographs representing the work of the society known as the Photo-Pictorialists of Buffalo. This exhibition was a great success from standpoints of interest, attendance, and sales. Considering this, the idea has been suggested that it might be well to hold in Buffalo an International Exhibition of Artistic Photography, organized on the same lines as the annual exhibitions of Selected Paintings by American Artists—each work being specifically invited. In other words, the plan would be to address an invitation to such artists in photography as have achieved international reputation to contribute to an exhibition (to be opened in Buffalo and thence, perhaps, transported in sequence to several other leading American art museums), such specific pictures as have elicited commendation from leading experts in the art. In addition, it is considered that there should be a section of the exhibition open for works contributed by any photographer whose productions might be deemed worthy of acceptance by a carefully selected jury—the basis of admission being such quality as would show these works worthy to be hung with the acknowledged masterpieces of photographic art secured by invitation.

It is believed that the highest art expression in photography is quite worthy of association with high art expression in other lines of effort, as painting, sculpture, engraving, etc., and the principal object of the exhibition contemplated would be the hope of effectively exemplifying this idea. It is probable that such an exhibition may be organized to open at the Albright Art Gallery in the fall or winter of 1909.

* * *

AWARDS IN THE 1908 KODAK PHOTOGRAPHIC ADVERTISING CONTEST.

CLASS A.

Professional Photographers Only.

H. E. Lawson, New York City. First prize, \$500.

F. & C. A. Maynard, Philadelphia, Pa. Second prize, \$250.

Geo. L. Gilbert, Burlington, Ia. Third prize, \$125.

Mrs. Gertrude Cockcroft, Alameda, Cal. Fourth prize, \$75.

Rudolf Eickemeyer, New York City. Fifth prize, \$50.

CLASS B.

Amateurs Only.

Mrs. W. W. Pearce, Waukegan, Ill. First prize, \$300.

R. P. DeVault, Battle Creek, Mich. Second prize, \$150.

H. B. Conyers, Urbana, Ohio. Third prize, \$75.

H. V. Roberts, Utica, N. Y. Fourth prize, \$50.

W. S. Ludden, Schenectady, N. Y. Fifth prize, \$25.

The judges were Mr. A. F. Bradley, of New York City; Mr. Elias Goldensky, of Philadelphia; Mr. J. R. Mix, advertising manager of *Scribner's Magazine*; Mr. Robert Frothingham, advertising manager of *Everybody's Magazine*, and Mr. H. S. Houston, advertising manager of *World's Work* and *Country Life in America*.

* * *

IT WILL BE OF SOME INTEREST TO THE TRADE to know that the Defender Photo Supply Co., of Argo Park, Rochester, N. Y., has discontinued its middle-western stockhouse at St. Louis, only, however, in so far as the sale of sundries is concerned. It was only a short time ago that this company discontinued its eastern stockhouse in New York City, and this news item from St. Louis bears out the announcement made by the Defender Company at that time, to the effect that it would gradually withdraw from the field of sundries and confine itself to the sale of its own products.

The New York office of the Defender Company, which had been located at 12 West 21st street, removed on December 1st to more suitable quarters at 35 West Twenty-first street.

THE WATKINS TIME DEVELOPER WITH THERMO INDICATOR, now being introduced by Burke & James, of Chicago, still further simplifies the process of development for the amateur, as it determines automatically the correct time for development at any temperature of practically all the various plates and films now on the American market.

Nothing is more difficult to the beginner in picture-making than the accurate judgment of negative density during development, and this new method will be heartily welcomed by the amateur, whatever method of development he employs. The Watkins Time Developer may be had in either liquid or powder form, either package making 48 ounces of developer for regular tray development. This developer may be also used for development purposes, and does not require the addition of bromide.

The theory of the Watkins system is this: Some plates require five times the development of others to attain the same contrast in the negative, and these variations have been determined by experiment and are indicated in a speed card which accompanies each package of developer. Each package is also supplied with a "Thermo Indicator" which, used in conjunction with the speed card, affords the time in minutes for development at any degree of temperature, within reasonable limits.

We advise all those having difficulty in acquiring correct density and proper contrast to give the new developer a trial as our experiments bear out the claims of its sponsors, the plates developed showing good printing quality and entire freedom from fog.

* * *

"LES PRODUITS CHIMIQUES PURS EN PHOTOGRAPHIE," by Camille Poulen, D. Sc. Published by Charles Mendel, 118 bis, rue d'Assas, Paris, France. Price, 2 fr. 50c.

At the present time a good many chemicals are used in photography and the photographer having occasion to look for information regarding some of these, has to turn to works on chemistry. If he understands the subject, he may find what he seeks, if not, he will only become hopelessly confused. The author recognizing these difficulties compiled a list of the more important substances, giving their various names of synonyms, properties, identification or recognition, possible impurities, strength and method of using, preservation, and general uses, 85 organic and in-

organic compounds are treated. The language is simple and free from scientific or technical expressions. This book undoubtedly must prove of value to the average photographer, amateur, or professional.

* * *

DARK ROOM DON'TS—Don't put dishes away dirty.

Don't leave a washing tank right way up when it is not in use. Drainings of water will accumulate and cause rust.

Don't dabble the fingers in the solutions more than is absolutely necessary. Use a plate lifter.

Don't keep hypo solution in a dish from day to day till it is the color of porter, and not half so good.

Don't put negatives up to dry without giving them a final rub under the tap with cotton wool.

Don't believe the darkroom light is so safe that there is no need to cover the dish during development.

Don't use a darkroom light of which you cannot believe this.

Don't take the negative out of the hypo as soon as it *seems* to be fixed. It isn't fixed; but it will be if given as long again.

Don't put solutions in unlabeled bottles, relying on memory to tell you their contents.

Don't put negatives or slides straight into hypo after development with hydroquinone. Give them a minute's washing under the tap, or there will be a risk of staining them yellow.

Don't curtail the time for washing plates or prints. If they are worth washing at all they are worth washing properly.

Don't try and develop bromide prints in the dim red light which is a necessity for ultra-rapid orthochromatic plates. It is impossible to get prints of the right depth and vigor, if you cannot comfortably see what you are doing.

Don't let a dish that is in use stand in a lot of wet. Sooner or later some of it will find its way inside, when if it is anything but plain water there may be trouble.—*Photography*.

* * *

A NEW METHOD OF PRINTING WITH COPPER.—The raw paper is first floated, says *Photo-*

graphische Mitteilungen, on the following solution for two minutes:

Water	2 oz.
Ferric chloride solution (s.g. 1.53 to 1.60)	13 min.
Copper chloride	100 gr.
Pure hydrochloric acid.....	12 min.

The paper is dried in the dark, and is then exposed under a normal negative for about twenty minutes. Ferrous chloride is thus produced in the printed image. The print is fixed for ten to twenty minutes in the following:

Water	2 oz.
Potass. sulphocyanide.....	8 to 12 gr.
Sulphuric acid	1 min.

The sulphocyanide converts the copper chloride into white, insoluble copper ferrocyanide, owing to the presence of the ferrous chloride. The print is now washed for an hour, and then the image made visible as follows:

About one hour's immersion in the solution given below will give a reddish picture:

Water	2 oz.
Potass. ferricyanide.....	60 to 120 gr.

The print is then washed until the whites are now long stained yellow.

Another toning formula is given thus:

Water	2 oz.
Ferrous sulphate	333 gr.
Ferrous chloride	134 gr.
Hydrochloric acid	267 min.

One to five minutes' immersion in this bath gives a violet to black tone.

* * *

INTENSIFYING WEAK AUTOCHROMES—Very weak and flat autochromes can be advantageously intensified, says *Photographische Notizen*, by first bleaching them in the following mercurial bath:

Mercuric chloride	40 gr.
Sodium chloride	40 gr.
Potassium bromide	40 gr.
Hydrochloric acid	123 drops
Water	4 oz.

The bleached plate is well washed and then reblackened by redevelopment with the amidol developer used in the ordinary routine. Special density and brilliance may be obtained, if desired, by using a 10 per cent. solution of ammonia for the reblackening.

* * *

REMOVING STAINS FROM THE HANDS.—Most development stains on the skin can be removed with lemon juice. Silver nitrate stains are more difficult to remove, but a solution of water 4 parts, chloride of lime 1 part, sodium sulphate 2 parts, applied with a tooth-brush, will generally be found efficacious.

Pyro stains can easily be removed with a ten per cent. solution of oxalic acid, but it should not be allowed to get into any cuts. Amidol stains are more difficult, but lemon juice or citric acid will generally answer.

Nitric acid stains are the worst, as this acid corrodes the skin. The application of a solution of potassium permanganate and a thorough rinse afterwards, should be tried.

* * *

KEEPING SODIUM SULPHITE SOLUTIONS.—It is well known that solutions of sodium sulphite will not keep properly, and for this reason alone it is always necessary to prepare the ordinary amidol developer a short time before use. By the addition, however, of potassium metabisulphite to the sodium sulphite it is possible to make a solution of really good keeping quality, and the following formula has been recommended:

Sodium sulphite	5 oz.
Potassium metabisulphite	1½ oz.
Water	30 oz.

This gives a 20 per cent. solution of sodium sulphite, which may be diluted or not as required. In making up a developer five ounces of the solution would be used instead of one ounce of dry sodium sulphite, and if the bulk were already sufficient, the developing agent, etc., could be dissolved at once in the solution without the addition of further water.

